

## Refine Search

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pluronic same (vesicle or liposome) same enzyme	1

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- US OCR Full-Text Database**
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- IBM Technical Disclosure Bulletins

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*DB=USPT,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR*

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<u>L22</u>	cleaning same (liposome or vesicle) same enzyme	3	<u>L22</u>
<u>L21</u>	cleaning same (liposome or vesicle) same pluronic	0	<u>L21</u>
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<u>L18</u>	pluronic same (laundry adj3 detergent)	7	<u>L18</u>
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<u>L13</u>	pluronic same vesicle same (laundry adj1 detergent)	0	<u>L13</u>
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<u>L10</u>	(\$block adj1 polymer) same (laundry)	7	<u>L10</u>
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<u>L7</u>	L2 and laundry	0	<u>L7</u>
<u>L6</u>	L1 and laundry	0	<u>L6</u>
<u>L5</u>	L3 and (enzyme)	32	<u>L5</u>
<u>L4</u>	L3 and (protein or enzyme)	36	<u>L4</u>
<u>L3</u>	L2 and (ethylene or ethylethylene or acryl\$ or vinylamine)	36	<u>L3</u>
<u>L2</u>	(\$block adj1 polymer) same (vesicle or liposome)	89	<u>L2</u>
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L18: Entry 3 of 7

File: USPT

Nov 13, 1984

US-PAT-NO: 4482630

DOCUMENT-IDENTIFIER: US 4482630 A

TITLE: Siliconate-coated enzyme

DATE-ISSUED: November 13, 1984

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Allen; Edwin	Oupeye			BE
Dillarstone; Alan	Rocourt			BE
Reul; Joseph A.	Heusy			BE

US-CL-CURRENT: 510/530; 252/384, 252/385, 435/183, 435/187, 435/188

## CLAIMS:

What is claimed is:

1. Particles of enzyme of sizes in the range of No's. 10 to 200, U.S. Sieve Series, at least partially coated with a salt of a lower alkyl siliconic acid and/or polymerization product(s) thereof formed therefrom on storage.
2. Enzyme particles according to claim 1 which are coated with from 0.05 to 1% of potassium methyl siliconate.

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L19: Entry 1 of 6

File: USPT

Jul 16, 1996

DOCUMENT-IDENTIFIER: US 5536440 A

TITLE: Stable, aqueous concentrated liquid detergent compositions containing hydrophilic copolymers

Brief Summary Text (49):

The detergent active matter may be selected from the group of anionic, nonionic, cationic, amphoteric and zwitterionic surfactants known to the skilled artisan. Examples of these surfactants may be found in McCutcheon, Detergents and Emulsifiers 1993, incorporated herein by reference. Examples of nonionic surfactants will include commonly utilized nonionic surfactants which are either linear or branched and have an HLB of from about 6 to 18, preferably from about 10 to 14. Examples of such nonionic detergents are alkylphenol oxyalkylates (preferably oxyethylates) and alcohol oxyethylates. Examples of the alkylphenol oxyalkylates include C.<sub>sub.6</sub> -C.<sub>sub.18</sub> alkylphenols with about 1-15 moles of ethylene oxide or propylene oxide or mixtures of both. Examples of alcohol oxyalkylates include C.<sub>sub.6</sub> -C.<sub>sub.18</sub> alcohols with about 1-15 moles of ethylene oxide or propylene oxide or mixtures of both. Some of these types of nonionic surfactants are available from BASF Corp. under the trademark PLURAFAC. Other types of nonionic surfactants are available from Shell under the trademark NEODOL. In particular, a C.<sub>sub.12</sub> -C.<sub>sub.15</sub> alcohol with an average of 7 moles of ethylene oxide under the trademark NEODOL.RTM. 25-7 is especially useful in preparing the laundry detergent compositions useful in the invention. Other examples of nonionic surfactants include products made by condensation of ethylene oxide and propylene oxide with ethylene diamine (BASF, TETRONIC.RTM. and TETRONIC.RTM. R). Also included are condensation products of ethylene oxide and propylene oxide with ethylene glycol and propylene glycol (BASF, PLURONIC .RTM. and PLURONIC.RTM. R). Other nonionic surface active agents also include alkylpolyglycosides, long chain aliphatic tertiary amine oxides and phosphine oxides.

Brief Summary Text (55):

The laundry detergent formulations heretofore described may also contain additional ingredients such as enzymes, anti-redeposition agents, optical brighteners, as well as dyes and perfumes known to those skilled in the art. Other optional ingredients may include fabric softeners, foam suppressants, and oxygen or chlorine releasing bleaching agents.

Detailed Description Text (7):

Lipolase, Savinase and Termamyl are laundry enzymes--Novo Nodisk BioIndustrials, Inc., Danbury, Conn.

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1. Document ID: US 5536440 A

L19: Entry 1 of 6

File: USPT

Jul 16, 1996

US - PAT - NO : 5536440

DOCUMENT- IDENTIFIER: US 5536440 A

**TITLE: Stable, aqueous concentrated liquid detergent compositions containing hydrophilic copolymers**

DATE-ISSUED: July 16, 1996

**INVENTOR - INFORMATION:**

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gopalkrishnan; Sridhar	Woodhaven	MI		
Sherman; John V.	Allen Park	MI		
Guiney; Kathleen M.	Wyandotte	MI		
Durocher; David T.	Westland	MI		
Welch; Michael C.	Woodhaven	MI		

US-CL-CURRENT: 510/417, 510/321, 510/337, 510/340, 510/393, 510/418, 510/424, 510/434, 510/476

2. Document ID: US 4482630 A

L19: Entry 2 of 6

File: USPT

Nov 13, 1984

US - PAT - NO: 4482630

DOCUMENT-IDENTIFIER: US 4482630 A

TITLE: Siliconate-coated enzyme

DATE-ISSUED: November 13, 1984

**INVENTOR - INFORMATION:**

NAME	CITY	STATE	ZIP CODE	COUNTRY
Allen; Edwin	Oupeye			BE
Dillarstone; Alan	Rocourt			BE
Reul; Joseph A.	Heusy			BE

US-CL-CURRENT: 510/530; 252/384, 252/385, 435/183, 435/187, 435/188

Full	Title	Citation	Front	Review	Classification	Date	Reference	Search	Print	Claims	KIMIC	Demand
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 3. Document ID: US 4482477 A

L19: Entry 3 of 6

File: USPT

Nov 13, 1984

US-PAT-NO: 4482477

DOCUMENT-IDENTIFIER: US 4482477 A

TITLE: Particulate detergent containing siliconate, composition and method for manufacture thereof

DATE-ISSUED: November 13, 1984

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Allen; Edwin	Oupeye			BE
Dillarstone; Alan	Rocourt			BE
Reul; Joseph A.	Heusy			BE

US-CL-CURRENT: 510/347; 252/383, 252/385, 510/306, 510/322, 510/324, 510/351,  
510/441, 510/442, 510/466

Full	Title	Citation	Front	Review	Classification	Date	Reference	Search	Print	Claims	KIMIC	Demand
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 4. Document ID: US 4482471 A

L19: Entry 4 of 6

File: USPT

Nov 13, 1984

US-PAT-NO: 4482471

DOCUMENT-IDENTIFIER: US 4482471 A

TITLE: Siliconate-coated sodium perborate

DATE-ISSUED: November 13, 1984

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Allen; Edwin	Oupeye			BE
Dillarstone; Alan	Rocourt			BE
Reul; Joseph A.	Heusy			BE

US-CL-CURRENT: 252/186.31; 252/383, 252/385

Full	Title	Citation	Front	Review	Classification	Date	Reference	Search	Print	Claims	KIMIC	Demand
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5. Document ID: US 4421657 A

L19: Entry 5 of 6

File: USPT

Dec 20, 1983

US-PAT-NO: 4421657

DOCUMENT-IDENTIFIER: US 4421657 A

TITLE: Heavy duty laundry softening detergent composition and method for manufacture thereof

DATE-ISSUED: December 20, 1983

## INVENTOR- INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Allen; Edwin	Oupeye			BE
Dillarstone; Alan	Rocourt			BE
Reul; Joseph A.	Heusy			BE

US-CL-CURRENT: 510/306, 252/383, 252/385, 510/307, 510/308, 510/334, 510/441,  
510/443, 510/444, 510/466, 556/465

Full	Title	Citation	Front	Review	Classification	Date	Reference				Claims	KMMC	Drawn D+
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 6. Document ID: US 4145183 A

L19: Entry 6 of 6

File: USPT

Mar 20, 1979

US-PAT-NO: 4145183

DOCUMENT-IDENTIFIER: US 4145183 A

TITLE: Method for the oxidative treatment of textiles with activated peroxygen compounds

DATE-ISSUED: March 20, 1979

## INVENTOR- INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bostwick; Joseph H.	Wilmington			

US-CL-CURRENT: 8/111, 134/26, 134/28, 134/38, 134/39, 134/40, 252/186.38, 427/301,  
427/322, 427/324, 510/303, 510/312, 510/338, 510/356, 510/413, 510/505

Full	Title	Citation	Front	Review	Classification	Date	Reference				Claims	KMMC	Drawn D+
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Terms	Documents
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